

IN THE CLAIMS

1. (currently amended) A rigid solid support, comprising:
 - (A) an antibody that specifically binds to CD28 at least one T cell affecting molecule selected from the group consisting of a T cell costimulatory molecule, an adhesion molecule, a T cell growth factor, a regulatory T cell inducer molecule, and an apoptosis inducing molecule; and
 - (B) an MHC class I-immunoglobulin complex comprising at least one molecular complex that, when bound to an antigen, engages a unique clonotypic lymphocyte receptor, wherein the at least one molecular complex is selected from the group consisting of:
 - (1) two fusion proteins, wherein each fusion protein comprises:
an MHC class I molecular complex comprising at least two fusion proteins, wherein a first fusion protein comprises a first MHC class I α chain comprising a peptide binding groove; and
an and a first immunoglobulin heavy chain comprising a variable region;
 - (2) two MHC class I β_2 microglobulin polypeptides; and
 - (3) two immunoglobulin light chains
and wherein a second fusion protein comprises a second MHC class I α chain and a second immunoglobulin heavy chain, wherein the first and second immunoglobulin heavy chains associate to form the MHC class I molecular complex, wherein the MHC class I molecular complex

comprises a first MHC class I peptide binding cleft and a second MHC class I peptide binding cleft; and

(2) an MHC class II molecular complex comprising at least four fusion proteins, wherein:

(a) two first fusion proteins comprise (i) an immunoglobulin heavy chain comprising a variable region and (ii) an extracellular domain of an MHC class II β chain; and

(b) two second fusion proteins comprise (i) an immunoglobulin light chain and (ii) an extracellular domain of an MHC class II α chain,

wherein the two first and the two second fusion proteins associate to form the MHC class II molecular complex, wherein the extracellular domain of the MHC class II β chain of each first fusion protein and the extracellular domain of the MHC class II α chain of each second fusion protein form an MHC class II peptide binding cleft,

wherein the rigid solid support is a bead.

2-11. (canceled)

12. (currently amended) The rigid solid support of claim 1 wherein the MHC class I- immunoglobulin at least one molecular complex comprises an antigenic peptide.

13. (previously presented) The rigid solid support of claim 12 wherein the antigenic peptide is selected from the group consisting of a peptide of a tumor-associated antigen, a peptide of an autoantigen, a peptide of an alloantigen, and a peptide of an infectious agent antigen.

14. (currently amended) The rigid solid support of claim 1 comprising ~~at least~~ two MHC class I-immunoglobulin molecular complexes.

15. (currently amended) The rigid solid support of claim 14 wherein an identical antigenic peptide is bound to each peptide binding groove ~~left~~ of the ~~at least~~ two MHC class I-immunoglobulin molecular complexes.

16. (withdrawn – currently amended) The rigid solid support of claim 14 wherein different antigenic peptides are bound to each peptide binding groove ~~left~~ of the ~~at least~~ two MHC class I-immunoglobulin molecular complexes.

17-47. (canceled)

48. (currently amended) A preparation comprising a plurality of the rigid solid supports of claim 1 artificial particles, wherein artificial particles of the plurality comprise:

(A) ~~at least one T cell lymphocyte affecting molecule selected from the group consisting of a T cell costimulatory molecule, an adhesion molecule, a T cell growth factor, a regulatory T cell induce molecule, and an apoptosis inducing molecule; and~~

(B) ~~at least one molecular complex that, when bound to an antigen, engages a unique clonotypic lymphocyte receptor, wherein the at least one molecular complex is selected from the group consisting of:~~

(1) ~~an MHC class I molecular complex comprising at least two fusion proteins, wherein a first fusion protein comprises a first MHC class I α chain and a first immunoglobulin heavy chain comprising a variable region and wherein a second fusion protein comprises a second MHC class I α chain and a second immunoglobulin heavy chain, wherein the first and second immunoglobulin heavy chains associate to form the MHC class I molecular complex, wherein the~~

MHC class I molecular complex comprises a first MHC class I peptide binding cleft and a second MHC class I peptide binding cleft; and

(2) an MHC class II molecular complex comprising at least four fusion proteins, wherein:

(a) two first fusion proteins comprise (i) an immunoglobulin heavy chain comprising a variable region and (ii) an extracellular domain of an MHC class II β chain; and

(b) two second fusion proteins comprise (i) an immunoglobulin light chain and (ii) an extracellular domain of an MHC class II α chain, wherein the two first and the two second fusion proteins associate to form the MHC class II molecular complex, wherein the extracellular domain of the MHC class II β chain of each first fusion protein and the extracellular domain of the MHC class II α chain of each second fusion protein form an MHC class II peptide binding cleft.

49. (original) The preparation of claim 48 further comprising a pharmaceutically acceptable carrier.

50-70. (canceled)

71. (withdrawn – currently amended) A method of inducing the formation of antigen-specific T cells, comprising the step of:

contacting an isolated preparation comprising a plurality of precursor T cells with ~~the at least one first rigid solid support of claim 1, wherein antigenic peptides antigens are bound to the peptide binding grooves antigenic binding clefts~~, thereby inducing members of the plurality of precursor T cells to form a first cell population comprising antigen-

specific T cells that recognize the antigenic peptides ~~antigen~~, wherein the number or percentage of antigen-specific T cells in the first cell population is greater than the number or percentage of antigen-specific T cells that are formed if precursor T cells are incubated with a rigid solid support that comprises an antibody that specifically binds to CD3 but does not comprise the MHC class I-immunoglobulin ~~an antigen presenting~~ complex.

72. (withdrawn) The method of claim 71 wherein the antigen-specific T cells are cytotoxic T cells.

73. (withdrawn) The method of claim 71 wherein the antigen-specific T cells are helper T cells.

74. (withdrawn) The method of claim 71 wherein the antigen-specific T cells are regulatory T cells.

75. (withdrawn) The method of claim 71 further comprising the step of separating the antigen-specific T cells from the first cell population.

76. (withdrawn – currently amended) The method of claim 71 further comprising the step of incubating the first cell population with ~~a at least one~~ second rigid solid support of claim 1, wherein antigenic peptides ~~antigens~~ are bound to the peptide binding grooves ~~antigen binding clefts~~, wherein the step of incubating is carried out for a period of time sufficient to form a second cell population comprising an increased number or percentage of antigen-specific T cells relative to the number or percentage of antigen-specific T cells in the first cell population.

77. (withdrawn – currently amended) The method of claim 71 wherein the antigenic peptides ~~antigens~~ are identical.

78. (withdrawn – currently amended) The method of claim 71 wherein the antigenic peptides antigens are different.

79. (withdrawn – currently amended) The method of claim 71 wherein the isolated preparation is contacted with ~~at least~~ two ~~first~~ rigid solid supports, wherein different antigenic peptides antigens are bound to the peptide binding grooves antigen binding clefts of the MHC class I-immunoglobulin molecular complexes of each of the ~~first~~ rigid solid supports.

80. (withdrawn – currently amended) A method of increasing the number or percentage of antigen-specific T cells in a population of cells, comprising the step of:

incubating a first cell population comprising antigen-specific T cells with ~~the at least one first~~ rigid solid support of claim 1, wherein antigenic peptides antigens are bound to the peptide binding grooves antigen binding clefts, wherein the step of incubating is carried out for a period of time sufficient to form a second cell population comprising an increased number or percentage of antigen-specific T cells relative to the number or percentage of antigen-specific T cells in the first cell population.

81. (withdrawn) The method of claim 80 wherein the first cell population is a homogeneous cell population.

82. (withdrawn) The method of claim 71 further comprising the step of administering the antigen-specific T cells to a patient.

83. (withdrawn) The method of claim 82 wherein the patient has cancer, an autoimmune disease, an infectious disease, or is immunosuppressed.

84. (withdrawn) The method of claim 82 wherein the precursor T cells are obtained from the patient.

85. (withdrawn) The method of claim 82 wherein the precursor T cells are obtained from a donor who is not the patient.

86. (withdrawn) The method of claim 82 wherein the antigen-specific T cells are administered by a route of administration selected from the group consisting of intravenous administration, intra-arterial administration, subcutaneous administration, intradermal administration, intralymphatic administration, and intra-tumoral administration.

87. (withdrawn) The method of claim 80 further comprising the step of administering the antigen-specific T cells of the second population to the patient.

88-145. (canceled)